

Therefore, the principle discussed by *In re Hyatt* is inapplicable to claims 16-18, 22 and the rejection should be withdrawn.

Claims 1-6, 9-13, 16-19 and 22 were rejected as unpatentable over Kobayashi et al. (U.S. Patent No. 6,029,264) in view of Steele et al. (U.S. Patent No. 4,393,276).

Independent claims 1, 6, 9, 13, 16 and 19 recite either a method of decoding channel data, an apparatus for decoding channel data, or a computer-readable medium that contains instructions for decoding channel data in which decoding the encoded data recites using a look-up table storing information that approximates the output of an algorithmic decoding process.

For example, look-up table 19 (*see* FIG. 5) is pre-configured to approximate the output of an algorithmic decoding process (pg. 5, lines 20-23). In that example, the entries of the look-up table are chosen so that the table's output response to a given set of N soft symbols corresponds to an approximation of the output of a conventional soft-input soft-output decoder 221 operating on a block of M symbols and in which the approximation can be based on some pre-specified criteria such as the mean square of an error term $E(n)$ (pg. 6, lines 1-13).

Kobayashi et al. discloses an iterative decoding procedure in which received encoded data is passed to ambiguity zone detector AZD at the receiver front end 12 (col. 6, lines 16-17). The AZD then assigns "erasure symbols" to the noisy received data and outputs data having five levels that include $\{0, e, 1, f, 2\}$. The levels e and f correspond to ambiguity zones in which the received data is not clearly a 0, 1 or 2 (col. 8, lines 33-45). The output from the AZD is then iteratively fed to a decoder that attempts to solve as many erasures/errors as possible (col. 6, lines 34-40).

The Office action alleges that quantizing the received packet of encoded data and assigning data erasure symbols to the quantized data by the AZD corresponds to a look-up table that approximates an algorithmic *decoding* process. Applicant respectfully disagrees. First, the received encoded data is not *decoded* by the AZD. The AZD simply quantizes the received encoded data to different output levels (col. 8, lines 40-45). Furthermore, Kobayashi et al. clearly indicates the decoding process is performed by the iterative sequential application of a "generalized maximum likelihood decoder (MLD)" (col. 8, lines 66-67 - col. 9, lines 1-11) and a

"generalized Hamming decoder" (col. 9, lines 51-58) which recover the original information sequence (col. 11, lines 13-14). Even if the AZD could be considered to involve a look-up table (which applicant disputes), it does not approximate the output of any algorithmic decoding process. Rather, the AZD assigns values based on the input level of the encoded data (col. 6, lines 16-20). It is, therefore, an approximation of an analog value, and not an algorithmic decoding process. Thus, Kobayashi et al. does not disclose or suggest decoding encoded data using a look-up table that stores the approximating output of an algorithmic decoding process.

Furthermore, Steele et al., individually or in combination with the Kobayashi et al. reference, does not disclose or suggest that feature or the claimed subject matter.

At least for the foregoing reasons, claims 1, 6, 9, 13, 16 and 19 should be allowed. Claims 2-5, 10-12, 17-18 and 22 depend from these claims and should be allowed for the same reasons.

It is believed all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Respectfully submitted,

Date: _____

1/17/06



Samuel Borodach
Reg. No. 38,388

Fish & Richardson P.C.
12390 El Camino Real
San Diego, CA 92130
Telephone: (858) 678-5070
Facsimile: (858) 678-5099
30263453.doc